BSc NUTRITION MAJOR INFORMATION SESSION

Christine Gurekian, MSc.
Academic Advisor
School of Human Nutrition | McGill University
christine.gurekian@mcgill.ca

https://mcgill.ca/nutrition/programs/undergraduate/nutrition

BSc(NutrSc): Major in Nutrition

The BSc (NutrSc) Nutrition Major is a 90-credit undergraduate degree. At its core, it deals with how diet and nutrition affect human health and disease risk. It offers you exciting opportunities to specialize in one of 5 concentrations, to incorporate research experience, travel for field studies, or a Minor in your program. It does not lead to professional licensure as a Dietitian/Nutritionist. However, it is excellent preparation for many careers including medical school, veterinary school and other professional schools, for graduate school, or for work in the food, pharma or other industry, government or NGO, or global health organizations.

Concentrations | Courses by semester | Research Experience | Minors | Career Paths | FAQs

Courses by semester

Download the appropriate course sheet for term-by-term course lists and complementary and elective courses:

Nutrition Major Advising Sheet

+ Food Function and Safety
+ Global Nutrition
+ Sports Nutrition

Comparison BSc Nutrition & Dietetics

Comparison checklist	Nutrition	Dietetics	Concurrent Degree
Degree	BSC(NutrSc)	BSc(NutrSc)	BSc(FoodSc)/ BSc(NutrSc)
Years of study	3	3.5	4
Total credits	90	115	122
"Free elective" credits	15	3	12
Summers off	Yes	No	Yes
Integrated internship or stage placements	No	Yes	Yes
Integrated stage placement in industry	No	No	Yes
Professional title of "dietitian-nutritionist"	No	Yes	No
Required academic grade point for progress	2.0	3.0	2.0
Challenging subjects	Yes	Yes	Yes
Ease of adding a minor	Yes	No	Yes
Develop a specialization	Yes	No	No
Course selection counselling with an advisor	Yes	Yes	Yes
Eligible for graduate studies	Yes	Yes	Yes
Potential for summer research experience	Yes	Yes	Yes
Potential for a term of field study experience	Yes	No	No

B.Sc. (Nutr. Sc.) - NUTRITION MAJOR

120 credits: 30 freshman + 63 credits required + 12 credits complementary + 15 credits electives

NAME: ID NUMBER:

Entered Program From: _____credits given on entrance

FRESHMAN

REQUIRED COURSES

COMMON COMPLEMENTARY

Compl	Grade	Freshman 1 Fall	14.5 credits Required	Equivalencies	
		AEBI 120	General Biology (3)	BIOL 111 or 101-NYA/OOUK with lab	
		AECH 110	General Chemistry 1 (4)	CHEM 110 or 202-NYA/OOUL with lab	
		AEMA 101	Calculus 1 (3)	MATH 139 or MATH 140 or 201-NYA/OOUN	
		AEPH 112	Introductory Physics 1 (4)	PHYS 101 or 203-NYA/OOUR with lab	
		AGRI 195	Freshman Seminar 1 (0.5)		
		Freshman 2 Winter	**15.5 credits Required**		
		AEBI 122	Cell Biology (3)	BIOL 112 or OOXU	
		AEMA 102	Calculus 2 (4)	MATH 141 or 201-NYB/OOUP	
		AEPH 114	Introductory Physics 2 (4)	PHYS 102 or 203-NYB + 203-NYC/OOUS + OOUT	
		FDSC 230	Organic Chemistry (4)	CHEM 212 or OOXV	
		AGRI 196	Freshman Seminar 2 (0.5)		
		U1 Fall (Term 1)	**13 credits Required**	**Prerequisites**	**Corequisites**
		FDSC 200	Introduction to Food Science (3)		
		LSCI 211	Biochemistry 1 (3)	FDSC 230 (or as coreq)	
		NUTR 207	Nutrition and Health (3)	AEBI 122 or equ, FDSC 230 (or as coreq)	
		NUTR 214	Food Fundamentals (4)	FDSC 230 (or as coreq)	LSCI 211, NUTR 207
		U1 Winter (Term 2)	**12 credits Required**		
		ANSC 234	Biochemistry 2 (3)	LSCI 211	
		FDSC 251	Food Chemistry 1 (3)	LSCI 211	
		LSCI 230	Introductory Microbiology (3)	-	
		NUTR 322	Appl. Sc. Communication (3)	Completion of 15 credits in a B.Sc. prog.	
		U2 Fall (Term 3)	**12 credits Required**		
		ANSC 323	Mammalian Physiology (3)	LSCI 204 or ANSC 234	
		FDSC 305	Food Chemistry 2 (3)	FDSC 251	
		LSCI 204	Genetics (3)	-	
		NUTR 307	Metabolism and Human Nutrition (3)	ANSC 234	ANSC 323 or NUTR 207
		U2 Winter (Term 4)	**13 credits Required**		
		AEMA 310	Statistical Methods 1 (3)		
		ANSC 424	Metabolic Endocrinology (3)	ANSC 323	
		NUTR 337	Nutrition Through Life (3)	ANSC 234, NUTR 307	
		NUTR 344	Clinical Nutrition 1 (4)	ANSC 234, ANSC 323, NUTR 307	NUTR 337, ANSC 424
		U3 Fall (Term 5)	**7 credits Required**		
		NUTR 401	Emerging Issues in Nutrition (1)	NUTR 344	NUTR 450
		NUTR 450	Research Methods Hum. Nutrition (3)	AEMA 310 and NUTR 307	
		NUTR 512	Herbs, Foods and Phytochemicals (3)	LSCI 211 or BIOL 201 or BIOC 212	
		Common Complementary Courses: All Concentrations		**(At least 6 credits from the following courses)**	
		ANSC 433	Animal Nutrition & Metabolism (3) W	ANSC 234	
		ANSC 560	Biology of Lactation (3) F		
		FDSC 537	Nutraceutical Chemistry (3)	LSCI 211 or permission	
		FDSC 545	Advances in Food Microbiology (3) W	MICR 230 or LSCI 230 or permission	
		NUTR 501	Nutrition in Developing Countries (3) F	Permission required	
		NUTR 503	Nutrition and Exercise (3) F	ANSC 234, ANSC 323, NUTR 207	
		NUTR 505	Public Health Nutrition (3) F	NUTR 337	
		NUTR 507	Advanced Human Biochemistry (3) W		
		NUTR 511	Nutrition and Behaviour (3) F	NUTR 337, NUTR 344	
		NUTR 537	Advanced Human Metabolism (3) F		
		NUTR 545	Clinical Nutrition 2 (4) F	NUTR 337, NUTR 344 and ANSC 424	
		NUTR 546	Clinical Nutrition 3 (4) F	NUTR 337, NUTR 344 and ANSC 424	
		NUTR 551	Analysis of Nutrition Data (3) F	NUTR 337, NUTR 450	
		PARA 438	Immunology (3) F		

CONCENTRATIONS

Choose one Concentration; All concentrations have 6 required credits and 6 complementary credits unique to the concentration.
No course may be counted more than once.

COMPL	GRADE	SPORTS NUTRITION	*
		EDKP 395 Exercise Physiology (3) F	
		NUTR 503 Nutrition and Exercise (3) W	
		At least 6 credits from the following courses:	
		ANAT 214 Systemic Human Anatomy (3)	
		EDKP 261 Motor Development (3)	
		EDKP 330 Physical Activity and Health (3)	
		EDKP 445 Exercise Metabolism (3)	
		EDKP 446 Physical Activity and Ageing (3)	
		EDKP 448 Exercise and Health Psychology (3)	
		EDKP 449 Exercise Pathophysiology II (3)	
		EDKP 485 Exercise Pathophysiology I (3)	
		EDKP 495 Scientific Principles of Training (3)	
		EDKP 542 Environmental Exercise Physiology (3)	
		NUTR 430 Directed Studies: Diet. & Nutrition 1 (3)	

COMPL	GRADE	METABOLISM, HEALTH AND DISEASE	*
		NUTR 507 Advanced Human Biochemistry (3) W	
		NUTR 537 Advanced Human Metabolism (3) F	
		At least 6 credits from the following courses	
		ANAT 214 Systemic Human Anatomy (3)	
		ANAT 261 Intro to Dynamic Histology (3)	
		ANAT 262 Intro Molecular and Cell Biology (3)	
		ANAT 322 Neuroendocrinology (3)	
		ANSC 324 Developmental Biology Reproduction (3)	
		ANSC 400 Eukaryotic Cells and Viruses (3)	
		ANSC 560 Biology of Lactation (3)	
		BIOL 300 Molecular Biology of the Gene (3)	
		BTEC 306 Experiments in Biotechnology (3)	
		MICR 341 Mechanisms of Pathogenicity (3)	
		NUTR 430 Directed Studies: Diet. &Nutrition 1 (3)	
		PARA 424 Fundamental Parasitology (3)	
		PATH 300 Human Disease (3)	
		PHAR 300 Drug Action (3)	
		PHAR 301 Drugs and Disease (3)	
		PHAR 303 Principles of Toxicology (3)	
		PHGY 311 Directed Studies: Diet. &Nutrition 1 (3)	
		PHGY 312 Respiratory, Renal, Cardio Physiology (3)	

COMPL	GRADE	FOOD FUNCTION AND SAFETY	*
		FDSC 300 Principles of Food Analysis 1 (3) F	
		FDSC 525 Food Quality Assurance (3) W	
		At least 6 credits from the following courses	
		AGRI 510 Professional Practice (3)	
		ANSC 350 Food Borne Pathogens (3)	
		FDSC 315 Sep. Techn. in Food Analysis (3)	
		FDSC 319 Food Commodities (3)	
		FDSC 330 Food Processing (3)	
		FDSC 334 Analysis Food Toxins & Toxicants (3)	
		FDSC 405 Product Development (3)	
		FDSC 442 Food Microbiology (3)	
		FDSC 516 Flavour Chemistry (3)	
		FDSC 520 Biophysical Chemistry of Food (3)	
		FDSC 535 Food Biotechnology (3)	
		FDSC 537 Nutraceutical Chemistry (3)	
		FDSC 540 Sensory Evaluation (3)	
		NUTR 430 Directed Studies: Diet. & Nutrition 1 (3)	

COMPL	GRADE	GLOBAL NUTRITION	*
		NUTR 501 Nutrition in Develop Countries (3) F	
		NUTR 505 Public Health Nutrition (3) F	
		At least 6 credits from the following courses	
		AGEC 330 Agriculture and Food Markets (3)	
		AGEC 442 Economics of Intern. Agri. Develop. (3)	
		AGRI 340 Principles of Ecological Agriculture (3)	
		AGRI 411 Glob. Issues Devel., Food & Agri. (3)	
		ANSC 433 Animal Nutrition and Metabolism (3)	
		ANSC 560 Biology of Lactation (3)	
		ANTH 302 New Horizons in Medical Anthro (3)	
		GEOG 303 Health Geography (3)	
		GEOG 403 Global Health and Envir. Change (3)	
		NUTR 341 Global Food Security (3)	
		NUTR 430 Directed Studies: Diet & Nutrition 1 (3)	
		NUTR 506 *Qualitative Methods in Nutrition (3)	
		NUTR 520 *Indigenous Peoples' Nutrition (3)	
		PARA 410 Environmental and Infection (3)	
		PARA 515 Water, Health and Sanitation (3)	
		PPHS 501 Population, Health & Epidemiology (3)	
		PPHS 511 Fundamentals of Global Health (3)	
		PPHS 529 Global Environmental Health and Burden of Disease (3)	

*Not offered in 2022-2023

		ELECTIVES (15 CR)	*

March 2022 reconfiguration - Academic Advisor (Nutrition)

CONCENTRATIONS

Choose a concentration in U2

Sports Nutrition

Metabolism, Health and Disease

Global Nutrition

Food Function and Safety

Declare your concentration by filling out the ‘Program change form’ and sending to christine.gurekian@mcgill.ca for signature

Concentration

For each concentration, you must complete

6 cr - required course

6 cr - complementary courses

Ex. ‘Metabolism, Health and Disease’ concentration;

NUTR 507 & NUTR 537 – required

Plus 6 credits from the list of complementary courses.

METABOLISM, HEALTH AND DISEASE

NUTR 507 Advanced Human Biochemistry (3) W
NUTR 537 Advanced Human Metabolism (3) F

At least 6 credits from the following courses

ANAT 214 Systemic Human Anatomy (3)
ANAT 261 Intro to Dynamic Histology (3)
ANAT 262 Intro Molecular and Cell Biology (3)
ANAT 322 Neuroendocrinology (3)
ANSC 324 Developmental Biology Reproduction (3)
ANSC 400 Eukaryotic Cells and Viruses (3)
ANSC 560 Biology of Lactation (3)
BIOL 300 Molecular Biology of the Gene (3)
BTEC 306 Experiments in Biotechnology (3)
MICR 341 Mechanisms of Pathogenicity (3)
NUTR 430 Directed Studies: Diet. &Nutrition 1 (3)
PARA 424 Fundamental Parasitology (3)
PATH 300 Human Disease (3)
PHAR 300 Drug Action (3)
PHAR 301 Drugs and Disease (3)
PHAR 303 Principles of Toxicology (3)
PHGY 311 Channels, Synapses & Hormones (3)
PHGY 312 Respiratory, Renal, Cardio Physiology (3)

ELECTIVES

15 credits

BSc Nutrition – Elective examples

*Follow your interests

FALL

AGEC 200 – Principles of Microecon
ANTH 227 – Medical Anthropology
ATOC 181 – Intro Atmospheric Sci
APSC 185 – Natural Disasters
CHEM 183 – World of Chem Drugs
ECON 208 – Microecon An&App
ENVB 301 – Meteorology
FAES 323- Indigenous cont issues
GEOG 216 – Geog World Economy
GSFS 200 – Feminist & Social Justice
MUAR 211 – Art of Listening
NUTR 341 - Global Food Security

WINTER

AGEC 231 – Econ Systems of Agriculture
ARTH 207 – Intro Early Mod. Art
ARTH 315 – Indigenous Art and Culture
CHEM 181 – World of Chem Food
CLAS 203 – Greek Mythology
COMP 204 – Computer Program Life Sci.
EAST 212 – Intro: East Asian Culture
EAST 357 – Early Chinese Art
ECON 208 – Microeconomic An&App
ENGL 225 – American Literature 1
GEOG 272 – Earth's Changing Surface
RELG 204 – Judaism, Christianity, Islam
SOCI 211 – Sociological Inquiry
SOCI 250 – Social Problems
SOCI 309 – Health and Illness
SOCI 388 - Crime

SUMMER

ANTH 209 – Anthr of Religion
CHEM 181 – World of Chem Food
COMS 200 – History of Commun
ECON 208 – Microecon An&App
LING 260 – Meaning Language
PHIL 375 - Existentialism
PSYC 100 – Intro Psychology
PSYC 211 – Intro Behav Neuro
PSYC 213 – Cognition

MINORS

Taking a Minor

Minors are either 18 or 24 credits

You must complete 18 credits that do not overlap with required or complementary credits in your Major

Credits from your Minor can replace your elective credits

Examples of Minors to take with the Nutrition Major

- Psychology
- Statistics
- Kinesiology
- Environment
- Marketing
- International Development Studies

HONOURS

BSc. Nutritional Sciences
Honours in Nutrition

Students in the BSc(NutrSc) Nutrition Major program who have a CGPA of at least 3.6, and a grade of at least A- in all NUTR courses can apply to transfer in Winter U2 term.

*It is the responsibility of each student to find a Professor to support and supervise a research project.

NUTR 491 – Honours Research 1 (3 credits)

- Development of a research proposal
- Presentation and submission of written proposal

NUTR 492 – Honours Research 2 (3 credits)

- Conduct first phase of research project to test hypothesis.
- Collection of data, initial interpretation fo findings, progress report and plan

NUTR 493 – Honours Research 3 (3 credits)

- Conduct the third phase of research project
- Completion fo study, data analysis, written progress report

NUTR 494 – Honours Research 4 (3 credits)

- Completion of research project
- Final interpretation of data in written manuscript-style report
- Defend in conference-style presentation

OTHER RESEARCH OPPORTUNITIES

SHN RESEARCH

NUTR 430 – Directed Studies

Can be taken in Fall, Winter or Summer (starting in U2)

Can be used as a complementary course

135 hours of research work; schedule organized by SHN Professor

Research may include literature research, lab work, data collection

Send your application form and updated CV to christine.gurekian@mcgill.ca and it will be sent to all SHN Professors.

Professors will contact you if they have availability in their lab for a NUTR 430 student.

NUTR 430 past project titles

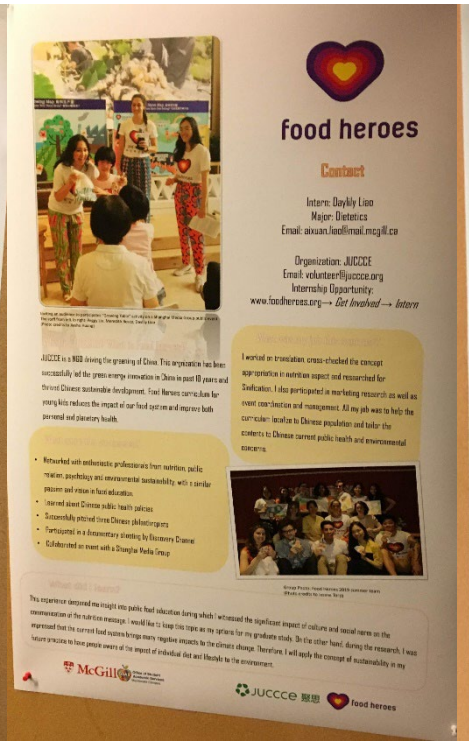
- Carotenoid status and **physical activity**
- Comparison of health behaviors and health management of Asian immigrants to local long-term residents in Quebec with **type I diabetes**
- Metabolic programming of **neutrophils** induced by dexamethasone.
- The effect of metabolic stress on the **inflammatory profile** of dendritic cells
- Do the “Big Five” Personality Traits Influence **Eating Behaviour**?
- Effect of dietary **probiotics** on the cecal microbial community of chickens
- The development of a glutaredoxin-2 knockout mouse line for the study of **glutathionylation reactions**
- Deciphering the impact of glutathionylation on **ROS production** by dihydroorotate dehydrogenase in liver mitochondria isolated from female mice.

INTERNSHIPS

Alton and Dianne McEwen and Family Internship Program

Contact kendra.gray@mcgill.ca

These full time internships are completed in the summer as FAES 300



RESEARCH

NSERC Undergraduate Student Research Award

Summer Award

Funding paid by NSERC and your Supervisor (SHN Professor)

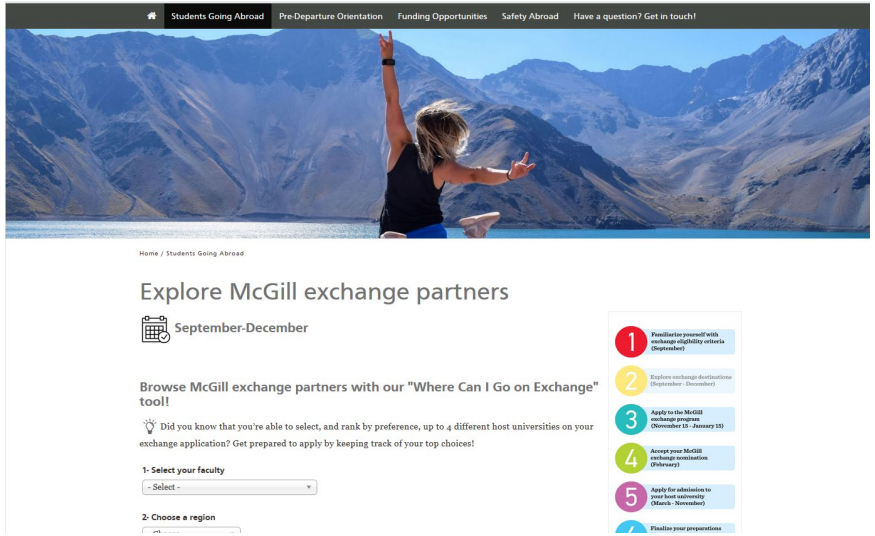
16 consecutive weeks on a full time basis

Eligibility:

- Canadian citizen or permanent resident
- CGPA 3.0
- Completed all course requirements for the 1st yr of university of your BSc

EXCHANGE

- If you are flexible with your schedule, McGill offers an exchange program!
- U3 Winter is the ideal semester to go on exchange since most of your required courses have been completed by then.
- CGPA 3.0
- *note: transcripts may not be sent back in time for students to attend the Macdonald Campus Convocation ceremony*



mcgill.ca/mcgillabroad

MAJOR TRANSFERS

Transfer to a Major at Macdonald Campus

Fill out the Program Change Form

Send to studentinfo.macdonald@mcgill.ca

Transfer to a Major at McGill downtown

Contact Advisor for that Program

CGPA REQUIREMENTS FOR SHN TRANSFERS

Major	CGPA
To Nutrition Major	3.0 CGPA
To Nutrition Major - Honours	3.6 CGPA, A- in all NUTR courses
To Dietetics Major	3.3 CGPA (Sept 2021 cut-off was 3.67)
To Concurrent Major	2.7 CGPA

Transfer to Dietetics

The following describes the process and priorities used in evaluating transfer applications:*

- Students are ranked by CGPA
- All previous university education may be taken into consideration
- Science R Scores (for Quebec students) may be taken into consideration
- Applicants should have been carrying a full course load (at least 12 credits) for each term. Students taking the required Nutrition courses or core science courses will be given priority.
- Students who have completed all entrance science pre-requisites will be given priority for transfer.
- Students cannot participate in the first stage component of the program (NUTR 208 in the first term of U1) unless all of their prerequisite courses are completed beforehand. Students missing entrance pre-requisites would need to do an additional year (4.5 years instead of 3.5 years).

June 1st deadline for September start

If required, French proficiency examination must be completed

AFTER GRADUATION

BSc Nutritional Sciences – Nutrition Major Career Paths

- Admission to **PROFESSIONAL SCHOOLS** (Medicine, Dentistry, Optometry, Veterinary School)
- **GRADUATE STUDIES** in nutrition, other life sciences, MBA, MPH.
- The **FOOD & PHARMA** industries in sales, product development and testing, education, marketing, industrial associations
- **GOVERNMENT & NON-GOVERNMENTAL ORGANIZATIONS** in program administration and development, public policy development, and research
- **INTERNATIONAL NUTRITION** & health promotion organizations like UN, FAO, WHO
- Work as a science-trained **WRITER/COMMUNICATOR** for technical report writing, education of health professionals and sales teams, communications of science to the public, media of all types.
- CaPS is valuable resource to help you get started at any stage (linda.cicuta@mcgill.ca)

BSc Nutritional Sciences – Nutrition Major Recently Graduated Students

- MSc
  - Thesis - Nutritional Sciences
  - Applied – Dietetics Credentialing
  - Laboratory Medicine and Pathobiology
  - Applied Physiology
  - Kinesiology
  - Animal Science
- Masters in Public Health
- Admission to Medicine, Dentistry, Pharmacy School
- Pharmaceutical Sales
- Product Development
- Digital Market Specialist (Nutrition company)

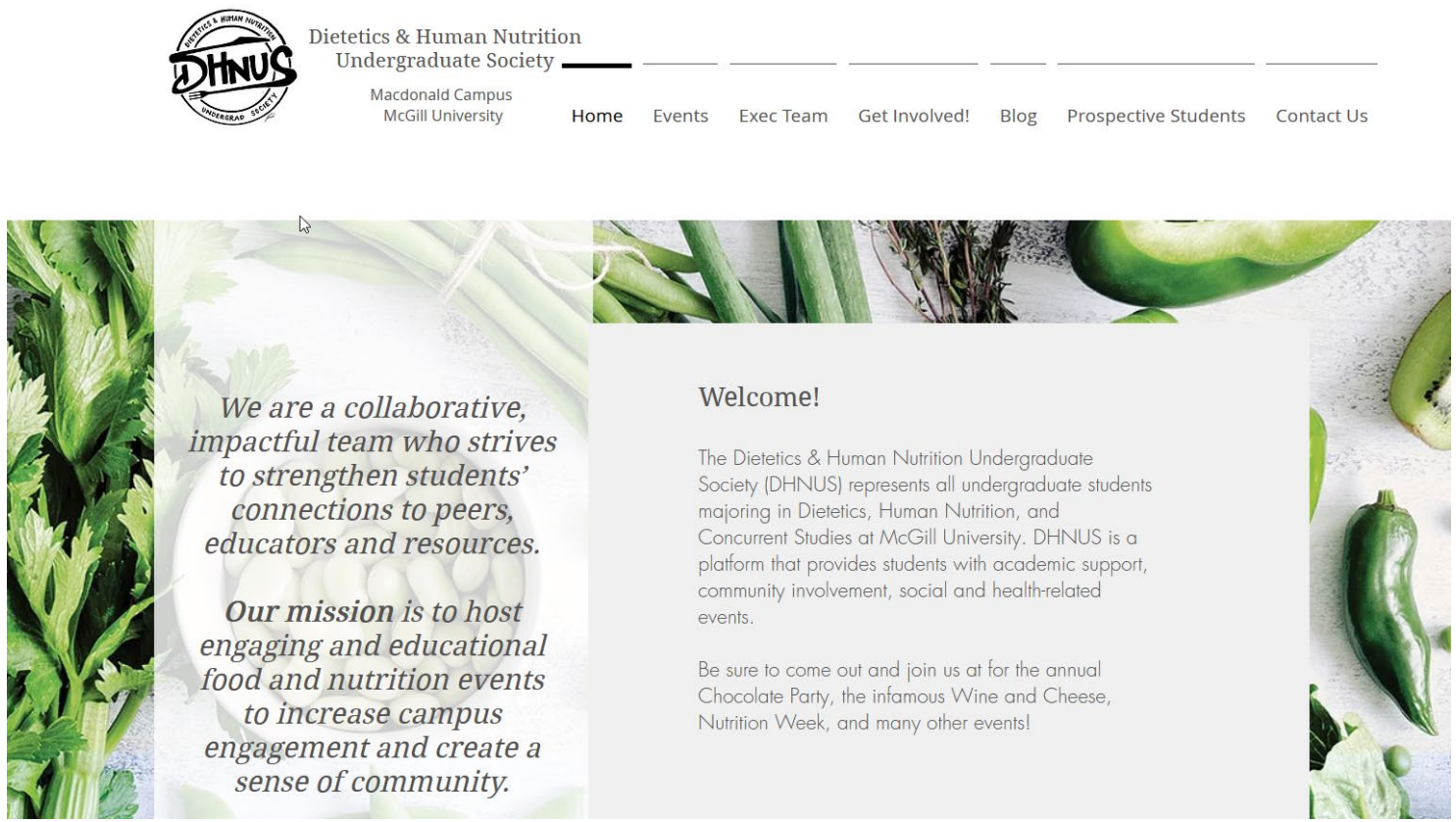
Student Life

DHNUS – Dietetics and Human Nutrition Undergraduate Society

dhnusmcgill.com

FB @McGillDHNUS

IG @dhnusmcgill



STUDENT RESOURCES

Advisor - Christine Gurekian
christine.gurekian@mcgill.ca

plan out your course sequence
consult regarding course equivalency
declare your concentration

Student Affairs Office (Laird Hall)
studentinfo.macdonald@mcgill.ca

inquire transferring credits
request program changes
exam deferrals
leaves of absence

Student Services and Student Wellness Hub (Centennial center or downtown) - Shannon Walsh
shannon.walsh@mcgill.ca

Meet with a health professional (Doctors, Nurses, Dietitians, Counselors, Psychiatrists, Sexologists)

CaPS - Linda Cicuta
linda.cicuta@mcgill.ca

Speak to an advisor about career opportunities

Dietetics & Human Nutrition
DHNUS
Undergraduate Society

christine.gurekian@mcgill.ca

studentinfo.macdonald@mcgill.ca